



MindsMapped Consulting – Online Java and J2EE Training

Java / J2EE Training

Pre-requisites: Basic knowledge of computer programming

Duration: 80 Hours(18 Session)

Call us at (+1) (435) 610-1777 / (801) 901-3010 info@mindsmapped.com

Session 1: Java Platform Overview

- ✚ Defining how the Java language achieves platform independence
- ✚ Differentiating between the Java ME, Java SE, and Java EE Platforms
- ✚ Evaluating Java libraries, middle-ware, and database options
- ✚ Defining how the Java language continues to evolve

Session 2: Object Oriented Analysis and Design

- ✚ Pillars of Object Oriented Analysis and Design
 - Encapsulation, Inheritance, Polymorphism, Abstraction
- ✚ Introduction to Systems thinking
- ✚ Learning through examples

Session 3: Java Syntax and Class Review

- ✚ Creating simple Java classes
- ✚ Creating primitive variables
- ✚ Using operators
- ✚ Creating and manipulate strings
- ✚ Using if-else and switch statements
- ✚ Iterating with loops: while,do-while, for, enhanced for
- ✚ Creating arrays
- ✚ Using Java fields, constructors, and methods

Session 4: Encapsulation and Subclassing

- ✚ Using encapsulation in Java class design
- ✚ Modeling business problems using Java classes
- ✚ Making classes immutable
- ✚ Creating and use Java subclasses
- ✚ Overloading methods

Session 5: Overriding Methods, Polymorphism, and Static Classes

- ✚ Using access levels: private, protected, default, and public.
- ✚ Overriding methods

- ✚ Using virtual method invocation
- ✚ Using varargs to specify variable arguments
- ✚ Using the instanceof operator to compare object types
- ✚ Using upward and downward casts
- ✚ Modeling business problems by using the static keyword
- ✚ Implementing the singleton design pattern

Session 6: Abstract and Nested Classes

- ✚ Designing general-purpose base classes by using abstract classes
- ✚ Constructing abstract Java classes and subclasses
- ✚ Applying final keyword in Java
- ✚ Distinguish between top-level and nested classes

Session 7: Interfaces and Lambda Expressions

- ✚ Defining a Java interface
- ✚ Choosing between interface inheritance and class inheritance
- ✚ Extending an interface
- ✚ Defaulting methods
- ✚ Anonymous inner classes
- ✚ Defining a Lambda Expression

Session 8: Collections and Generics

- ✚ Creating a custom generic class
- ✚ Using the type inference diamond to create an object
- ✚ Creating a collection by using generics
- ✚ Implementing an ArrayList
- ✚ Implementing a TreeSet
- ✚ Implementing a HashMap
- ✚ Implementing a Deque
- ✚ Ordering collections

Session 9: Collections Streams, and Filters

- ✚ Describing the Builder pattern
- ✚ Iterating through a collection using lambda syntax
- ✚ Describing the Stream interface



- ✦ Filtering a collection using lambda expressions
- ✦ Calling an existing method using a method reference
- ✦ Chaining multiple methods together
- ✦ Defining pipelines in terms of lambdas and collections

Session 10: Exceptions and Assertions

- ✦ Defining the purpose of Java exceptions
- ✦ Using the try and throw statements
- ✦ Using the catch, multi-catch, and finally clauses
- ✦ Autoclose resources with a try-with-resources statement
- ✦ Recognizing common exception classes and categories
- ✦ Creating custom exceptions
- ✦ Testing invariants by using assertions

Session 11: Java Date/Time API

- ✦ Creating and manage date-based events
- ✦ Creating and manage time-based events
- ✦ Combining date and time into a single object
- ✦ Working with dates and times across time zones
- ✦ Managing changes resulting from daylight savings
- ✦ Defining and create timestamps, periods and durations
- ✦ Applying formatting to local and zoned dates and times

Session 12: I/O Fundamentals

- ✦ Describing the basics of input and output in Java
- ✦ Read and write data from the console
- ✦ Using streams to read and write files
- ✦ Writing and read objects using serialization

Session 13: Concurrency

- ✦ Describing operating system task scheduling
- ✦ Creating worker threads using Runnable and Callable
- ✦ Using an ExecutorService to concurrently execute tasks
- ✦ Identifying potential threading problems
- ✦ Using synchronized and concurrent atomic to manage atomicity

- ✦ Using monitor locks to control the order of thread execution
- ✦ Using the java.util.concurrent collections
- ✦ Fork-Join Framework

Session 14: Database Applications with JDBC

- ✦ Defining the layout of the JDBC API
- ✦ Connecting to a database by using a JDBC driver
- ✦ Submitting queries and get results from the database
- ✦ Specifying JDBC driver information externally
- ✦ Performing CRUD operations using the JDBC API

Session 15: Internationalization (i18n) and Localization (l10n)

- ✦ Describing the advantages of localizing an application
- ✦ Defining what a locale represents
- ✦ Read and set the locale by using the Locale object
- ✦ Building a resource bundle for each locale
- ✦ Calling a resource bundle from an application
- ✦ Changing the locale for a resource bundle

Session 16: Web Technology Overview

- ✦ Describe the role of web components in a Java EE application
- ✦ Define the HTTP request-response model
- ✦ Compare Java servlets, JSP, and JSF
- ✦ Brief introduction to technologies not covered in detail

Session 17: Developing Servlets

- ✦ Describe the servlet API
- ✦ Servlet configuration through annotations and deployment descriptors
- ✦ Use the request and response APIs
- ✦ Servlets as controllers

Session 18: Developing With Java Server Pages Technology

- ✦ Evaluate the role of JSP technology as a presentation mechanism
- ✦ Author JSP pages



MindsMapped Consulting – Online Java and J2EE Training

- ✦ Process data received from servlets in a JSP page
- ✦ JSTL and EL

Session 19: Hibernate

- ✦ Introduction to Hibernate and Object Relational Mapping (ORM)
- ✦ Integrating and Configuring Hibernate
- ✦ Building a Simple Application
- ✦ The Persistence Life Cycle
- ✦ An Overview of Mapping
- ✦ Mapping with Annotations
- ✦ Creating Mappings with Hibernate XML Files
- ✦ Lazy Loading
- ✦ Using the Session
- ✦ Searches and Queries
- ✦ Advanced Queries Using Criteria
- ✦ Filtering the Results of Searches
- ✦ Hibernate Caching
- ✦ Hibernate Advanced Features
- ✦ Mini-Project Using Hibernate

Session 20: Struts Struts 2.x

- ✦ Basic Components of Struts 2
- ✦ Struts 2 Features
- ✦ Differences between Struts 1.x & 2.x
- ✦ Steps to Create Struts 2 Application
- ✦ Core Components in Struts 2
- ✦ Struts 2 Work Flow
- ✦ Struts 2 Action
- ✦ Struts 2 Configuration
- ✦ Struts 2 Tag Library
- ✦ Interceptors
- ✦ Struts 2 Validation
- ✦ Aware Interfaces
- ✦ Internationalization (I18N) in Struts 2.x

Course Highlights:

- ✦ Industry based Project work.
- ✦ Life time access to Knowledge base.
- ✦ Hands on project execution.
- ✦ Resume preparation and Mock Interviews
- ✦ Get Java Certified

For more information, call us on (+1) (435) 610-1777 / (801) 901-3010 Or email us at info@mindsmapped.com

- ✦ Zero Configuration
- ✦ Files Uploading and Downloading
- ✦ Securing struts application
- ✦ Custom interceptors
- ✦ Data store using Struts 2
- ✦ Struts 2 with Tiles 2
- ✦ Mini Project with Struts 2

Session 21: Spring

- ✦ Introduction to Spring Framework
- ✦ Spring Core
- ✦ Spring JDBC/DAO
- ✦ Spring ORM
- ✦ Spring AOP
- ✦ Spring MVC
- ✦ Spring with JMS Integration
- ✦ Spring 3.0 Annotations
- ✦ Spring Security
- ✦ Spring with Quartz Integration (Scheduler)
- ✦ Spring OXM
- ✦ Spring WebFlow Overview
- ✦ Spring Batch Overview

Session 22: Introduction to Web Services

- ✦ SOAP Architecture
- ✦ RESTful Architecture

Session 23: Struts-Spring-Hibernate Integration

Session 24: Industrial project

Session 25: Java Application Development – Best Practices

Session 26: Java Interview Preparation

Session 27: Java Resume Preparation